

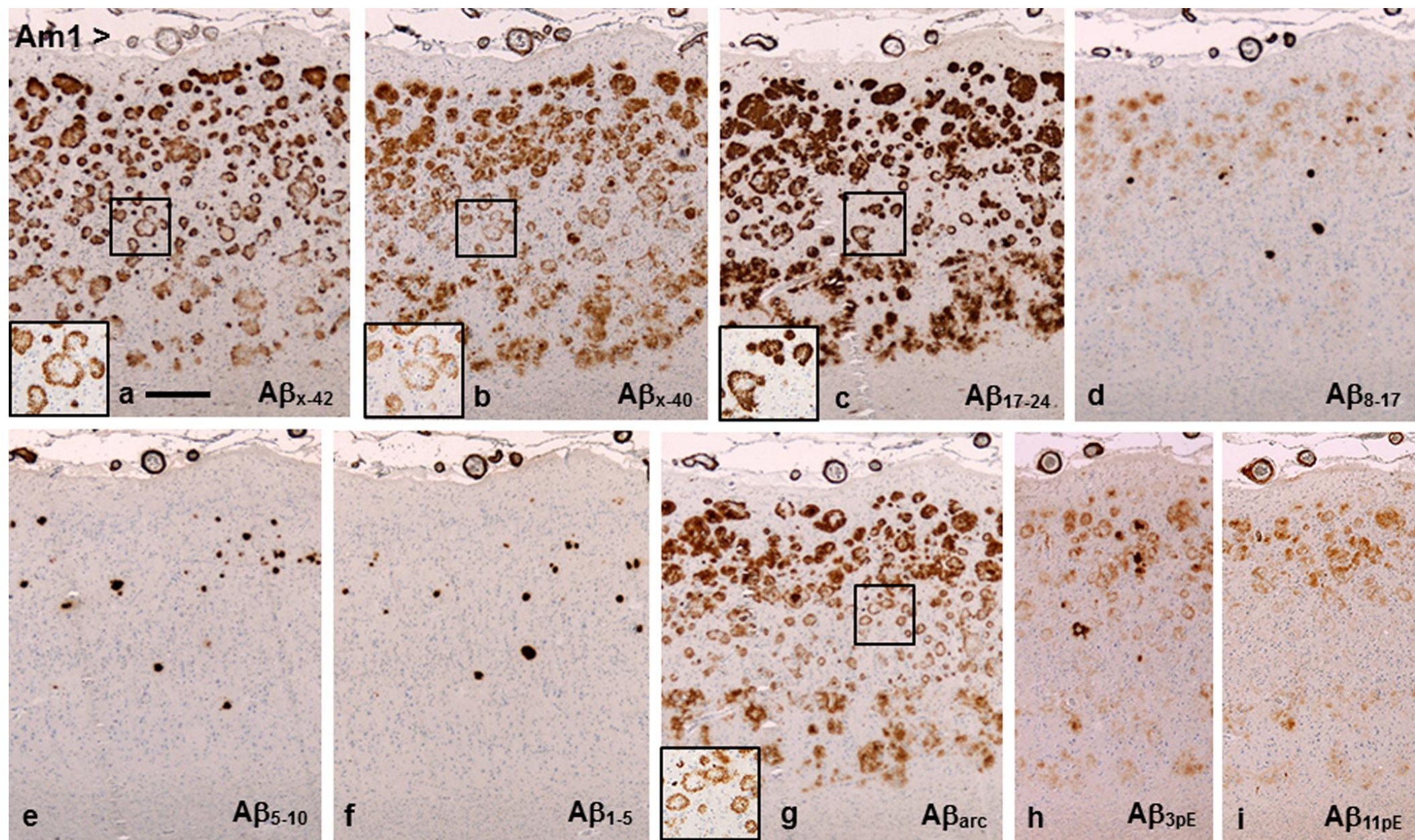
**Title:** The *Arctic APP* mutation leads to Alzheimer's disease pathology with highly variable topographic deposition of differentially truncated A $\beta$

**Journal:** Acta Neuropathologica Communications

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**Suppl. Fig. 1** In semiconsecutive sections from Am1 patient's frontal cortex the plaques appear ring-shaped with C-terminal abA $\beta_{x-42}$  and abA $\beta_{x-40}$ , mid-domain abA $\beta_{17-24}$  and Arctic specific abA $\beta_{arc}$  (**a-c** and **g** plus insets), whereas with more N-terminal (beyond aa 17) abA $\beta_{8-17}$ , abA $\beta_{5-10}$  and abA $\beta_{1-5}$  (**d-f**) the plaques stain progressively weaker, although some plaques have intensely stained centres. Robust staining with abA $\beta_{arc}$  suggests an abundance of Arctic A $\beta$  and a fair amount of A $\beta$  appears to have pyroglutamate at positions 3 and 11 (**h** and **i**). The lesser number of plaques in layer 4 creates a sparsely populated band, best visible in **b-d** and **g-i** (similar band was observed in Am2 patient). No plaques are detectable in layer 1. Leptomeningeal blood vessels in **b-i** are strongly A $\beta$ -positive, whereas in **a** they are only weakly positive. (*bar* in **a** 300  $\mu$ m for all panels)